

SIGNIFICANCE OF THE FUNCTIONAL BUTTER PASTE CREATING WITH BLUEBERRY MICRONUTRIENTS

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Today we are living in conditions of environmental degradation, harmful globalization and effects of mushroom growth technogenic time, that set off negative chain-reaction throughout the whole human life. According to this fact, the problem of diet quality as one of the health management level, is now becoming more relevant around the world. Therefore, in recent years interest has been growing rapidly for creating and promoting functional purpose of products that directed not only at the pleasure of taste, energy and aesthetic human needs, and, in particular, could provide a comprehensive positive preventive, recreational, radioprotective and general health-improving effect on the human body.

The traditional end use of milk fat surplus has been butter. It is one of the leading Ukrainian dairy products. The statistics of last 10 years indicates that the annual consumption of butter has decreased. The major reason for the decline in butter consumption is a growing consumer preference for reduced intake of cholesterol and saturated fats as part of a healthier life style. The availability of butter substitutes, margarines, and shortenings has also significantly contributed to this trend.

The physiological functionality of fatty products including butter, due to, especially, their chemical composition. The characteristic of fat functionality is the nutritional value and biological efficiency that is a part of index of nutritional value and is the basic criteria of functionality. There is a positive correlation between the integral indicator of nutritional fats and quantitative value in them fat-soluble vitamins and related biologically active substances. According to data from the Institute of Nutrition, nutritional value people fatty acid family of ω -3 and ω -6 has a range from 1:5 to 1:10, with the ratio of PUFA: NLC should be from 1:1 to

2:1, content of trans-isomers of fatty acids - never more than 8.0%. We can assume that the ratio of fatty acids in a balanced fat written as follows: 35-45% PUFA (of which 3-8% ω -3 - fatty acids and 29-37% ω -6 - fatty acids), 30-35% MUFA and 28-35% SFA. Thus, the ratio of PUFA: MUFA: SFA in the "ideal" fat should be about 1:1:1. Today, virtually none of the types of natural butter, produced by dairy industry, can not be considered optimal for physiological parameters, primarily in fatty acid composition and function. Therefore, there is a need to create a new product that would be optimized for fatty acid composition, lower calorie, higher levels of milk serum, nonfat milk-solids content and would be enriched in multifunctional composition of plant micronutrients (especially of blueberry) with the intended function.

Blueberries are among the highest in antioxidant capacity among all fruits and vegetables as measured by the oxygen radical absorbance capacity assay. Blueberries have been shown to possess a variety of beneficial properties in protection against inflammation, carcinogenesis, and chronic diseases. The studies suggest that high dietary intake of polyphenols is associated with decreased risk of a range of diseases including cardiovascular disease and some forms of cancer. Blueberry is particularly rich in polyphenols. Numerous cell culture studies and animal studies have demonstrated the antioxidant and anticancer potentials of this polyphenols. According to research results of the Institute of Experimental Pathology, Oncology and Radiology of the National Academy of Sciences of Ukraine and Research Institute of Stomatology Academy of Medical Sciences of Ukraine blueberry is a powerful natural antioxidant that activates the immune system, takes preventive properties, increases resistance, normalizes hemoglobin, stimulates mental activity, increases concentration, improves memory. It is a mild natural anti-depressant (stimulates the production of dopamine). It has hepatoprotective, anticarcinogenic, hypoglycemic (normalizes blood sugar) and hypocholesteremic (lowers cholesterol) actions.

The benefits of blueberries have been known for a long time. But only a few people know that fresh blueberry partially assimilated in the body. Use of

blueberries as pasta and fructose syrup gives absorption in the body by 100%. We assume that micronutrients of bilberry would be more effective in combination with a milk fat-protein complex of butter paste. Due to this fact we will have an opportunity to use valuable dietary micronutrients better in the new product. Also realizing that the dominant of consumer demand among the population has changed and the number of patients with cardiovascular disease, diabetes and various types of cancer progresses rapidly, the development of a butter pasta with micronutrients of bilberry is an integral part of the concept of healthy food and life stile.

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